

CLAIMS

We claim:

- 5           1.     A method of programmatically managing a lifetime of client-specific data objects over one or more client sessions, the method comprising:
- receiving a first begin scope instruction;
- tracking one or more first client-specific data objects in response to the first begin scope instruction;
- 10           receiving a first end scope instruction; and
- removing the first client-specific resource data objects in response to the first end scope instruction.
2.     The method of Claim 1, further comprising:
- 15           if the first begin scope instruction includes a transient scope instruction and a current client session terminates, then removing the first client-specific resource data objects prior to the first end scope instruction.
3.     The method of Claim 1, further comprising:
- 20           if the first begin scope instruction includes a persistent scope instruction, and one or more of the first client-specific resource data objects is designated persistent in response to a client instruction, then:
- if a current client session terminates, then storing the designated persistent client-specific data objects for use in a next client session.
- 25           4.     The method of Claim 1, wherein the client designates the persistent data objects by naming the data objects in a persistent folder in the client name-space.
5.     The method of Claim 1, further comprising:
- 30           if the first begin scope instruction includes a transient scope instruction and a current client session terminates, then removing the first client-specific resource data objects prior to the first end scope instruction; and

if the first begin scope instruction includes a persistent scope instruction, and one or more of the first client-specific resource data objects is designated persistent in response to a client instruction, then:

5 if a current client session terminates, then storing the designated persistent client-specific data objects for use in the next client session.

6. The method of Claim 1, wherein the first begin scope instruction and the first end scope instruction include information identifying the first begin scope instruction and the first end scope instruction.

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7. The method of Claim 1, further comprising:  
receiving a second begin scope instruction, wherein the second begin scope instruction is received after the first begin scope instruction and before the first end scope instruction;

15 tracking one or more second client-specific resource data objects starting with the second begin scope instruction;

pausing the tracking of the first client-specific resource data;

receiving a second end scope instruction before receiving the first end scope instruction;

20 removing the second client-specific resource data objects in response to the second end scope instruction; and

resuming tracking the first client-specific resource data objects.

8. The method of Claim 7, further comprising:  
25 if the first and second begin scope instructions include a transient scope instruction and a current client session terminates, then removing the first and second client-specific resource data objects prior to the first and second end scope instructions.

9. The method of Claim 7, further comprising:  
30 if the first and second begin scope instructions include a persistent scope instruction, and one or more of the first and second client-specific resource data objects are designated persistent in response to a client instruction, then:

if a current client session terminates, then storing the designated persistent first and second client-specific data objects for use in a next client session.

10. The method of Claim 7, wherein the client designates the persistent data  
5 objects by naming the data objects in a persistent folder in the client name-space.

11. The method of Claim 7, further comprising:

if the first and second begin scope instructions include a transient scope instruction and a current client session terminates, then removing the first and second  
10 client-specific resource data objects prior to the first and second end scope instructions; and

if the first and second begin scope instructions include a persistent scope instruction, and one or more of the first and second client-specific resource data objects are designated persistent in response to a client instruction, then:

15 if a current client session terminates, then storing the designated persistent first and second client-specific data objects for use in a next client session.

12. The method of Claim 7, wherein the first begin scope instruction includes a persistent scope instruction and the second begin scope instruction includes a transient scope instruction.  
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13. A computer system for programmatically managing the lifetime of client-specific resource data objects over one or more client sessions, the computer system comprising:

25 one or more computers interconnected by a computer network;  
a computer program executing on at least one the computers;  
wherein the computer program further comprise computer instructions for:  
receiving a first begin scope instruction;  
tracking one or more first client-specific resource data objects in response  
30 to the first begin scope instruction;  
receiving a first end scope instruction; and  
removing the first client-specific resource data objects in response to the first end scope instruction.

14. The computer system of Claim 13, wherein the computer program further comprises computer instructions for:

- 5 if the first begin scope instruction includes a transient scope instruction and a current client session terminates, then removing the first client-specific resource data objects prior to the first end scope instruction.

15. The computer system of Claim 13, wherein the computer program further comprises computer instructions for:

- 10 if the first begin scope instruction includes a persistent scope instruction, and one or more of the first client-specific resource data objects is designated persistent in response to a client instruction, then:

if a current client session terminates, then storing the designated persistent client-specific data objects for use in a next client session.

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16. The computer system of Claim 13, wherein the computer program further comprises computer instructions for designating the persistent data objects by providing a name for the data objects in a persistent folder in the client name-space in response to a client instruction.

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17. The computer system of Claim 13, wherein the computer program further comprises computer instructions for:

- 25 if the first begin scope instruction includes a transient scope instruction and a current client session terminates, then removing the first client-specific resource data objects prior to the first end scope instruction; and

if the first begin scope instruction includes a persistent scope instruction, and one or more of the first client-specific resource data objects is designated persistent in response to a client instruction, then:

- 30 if a current client session terminates, then storing the designated persistent client-specific data objects for use in the next client session.

18. The computer system of Claim 13, wherein the first begin scope instruction and the first end scope instruction include information identifying the first begin scope instruction and the first end scope instruction.

19. The computer system of Claim 13, wherein the computer program further comprises computer instructions for:

receiving a second begin scope instruction, wherein the second begin scope instruction is received after the first begin scope instruction and before the first end scope instruction;

tracking one or more second client-specific resource data objects starting with the second begin scope instruction;

pausing the tracking of the first client-specific resource data objects;

receiving a second end scope instruction before receiving the first end scope instruction;

removing the second client-specific resource data objects in response to the second end scope instruction; and

resuming tracking the first client-specific resource data objects.

20. The computer system of Claim 19, wherein the computer program further comprises computer instructions for:

if the first and second begin scope instructions include a transient scope instruction and a current client session terminates, then removing the first and second client-specific resource data objects prior to the first and second end scope instructions.

21. The computer system of Claim 19, wherein the computer program further comprises computer instructions for:

if the first and second begin scope instructions include a persistent scope instruction, and one or more of the first and second client-specific resource data objects are designated persistent in response to a client instruction, then:

if a current client session terminates, then storing the designated persistent first and second client-specific data objects for use in a next client session.

22. The computer system of Claim 19, wherein the computer program further comprises computer instructions for designating the persistent data objects by providing a name for the data objects in a persistent folder in the client name-space in response to a client instruction.

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23. The computer system of Claim 19, wherein the computer program further comprises computer instructions for:

if the first and second begin scope instructions include a transient scope instruction and a current client session terminates, then removing the first and second client-specific resource data objects prior to the first and second end scope instructions; and

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if the first and second begin scope instructions include a persistent scope instruction, and one or more of the first and second client-specific resource data objects are designated persistent in response to a client instruction, then:

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if a current client session terminates, then storing the designated persistent first and second client-specific data objects for use in a next client session.

24. The computer system of Claim 19, wherein the first begin scope instruction includes a persistent scope instruction and the second begin scope instruction includes a transient scope instruction.

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